

Mr. James Peraino
DaimlerChrysler Corporation
Kokomo Transmission Plant
2401 South Reed Road
Kokomo, Indiana 46904

Re: 067-12243-00065
Significant Source Modification to:
Part 70 permit No.: T067-6504-00065

Dear Mr. Peraino:

Kokomo Transmission Plant was issued Part 70 operating permit T067-6504-000065 on September 1, 1999 for the manufacture of various parts for automobile and light duty-truck transmissions. An application to modify the source was received on May 7, 2000. Pursuant to 326 IAC 2-7-10.5(g) the following emission units are approved for construction at the source:

- (a) Kokomo Casting Plant (KCP):
 - (1) Sixteen (16) die cast machines. The die casting operation has four segments, casting (segment 1), die lube (segment 2) with a maximum usage rate of 4.9 gallons per hour, hot oil system lube (segment 3), and tip lube (segment 4) with a maximum usage rate of 2.23 gallons per hour; and
- (b) Kokomo Transmission Plant (KTP):
 - (2) One hundred forty nine (149) wet machines, controlled by fifteen (15) oil mist collectors, each machine oil mist collector has a maximum air flow rate of 30,000 actual cubic feet per minute (acfm).

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of

this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit as an administrative amendment in accordance with 326 IAC 2-7-10.5(l)(1) and 326 IAC 2-7-11.

The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit as an administrative amendment in accordance with 326 IAC 2-7-10.5(l)(1) and 326 IAC 2-7-11.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, press 0 and ask for Aida De Guzman or extension (3-4972), or dial (317) 233-4972.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
APD

cc: File - Howard County
U.S. EPA, Region V
Howard County Health Department
Air Compliance Section Inspector - Ryan Hillman
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR MANAGEMENT

**DaimlerChrysler Corporation
2401 South Reed Road
Kokomo, Indiana 46904**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 067-12243-00065	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

SECTION D.10 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (a) Kokomo Casting Plant (KCP):
- (1) Sixteen (16) die cast machines. The die casting operation has four segments, casting (segment 1), die lube (segment 2) with a maximum usage rate of 4.9 gallons per hour, hot oil system lube (segment 3), and tip lube (segment 4) with a maximum usage rate of 2.23 gallons per hour; and
- (a) Kokomo Transmission Plant (KTP):
- (1) One hundred forty nine (149) wet machines, controlled by fifteen (15) oil mist collectors, each machine oil mist collector has a maximum air flow rate of 30,000 actual cubic feet per minute (acfm).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.10.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2 and 40 CFR 52.21]

The Particulate Matter (PM) and Particulate Matter Less Than Ten Microns (PM₁₀) emissions from **each** of the fifteen (15) oil mist collectors which control the one hundred forty nine (149) wet machines shall be limited as follows:

Outlet Grain Loading grain per dry standard cubic foot (gr/dscf)	PM/PM ₁₀ Emissions Limit (pounds per hour)
0.03	0.05

Compliance with this Condition and Conditions D.10.4, D.10.6 and D.10.7 will make 326 IAC 2-2 and 40 CR 52.21 (PSD) not applicable and will also satisfy the requirements under 326 IAC 6-1 (Particulate Emissions Limitations for Nonattainment Areas).

D.10.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Any change or modification which may increase the potential VOC emissions to 25 tons per year or more from the fluid application to the wet machines covered in this permit must be approved by the Office of Air Management (OAM) and be subject to 326 IAC 8-1-6 (General Reduction Requirements) before such change may occur.

D.10.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these wet machines and their control devices.

Compliance Determination Requirements

D.10.4 Particulate Matter (PM)/Particulate Matter Less Than Ten Microns (PM₁₀)

The oil mist collectors shall be in operation at all times when the wet machines are in operation.

D.10.5 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

Compliance stack tests on four (4) representative oil mist collectors shall be made within 180 days after achieving maximum production rate, but no later than 365 days after receipt of this permit. The Permittee shall perform PM and PM₁₀ testing. Testing shall be conducted using methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10. Testing shall be conducted in accordance with Section C- Performance

Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.10.6 Visible Emissions Notations

- (a) Daily visible emission notations of the mist collectors stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.10.7 Parametric Monitoring

The Permittee shall record the total static pressure drop on the mist collectors used in conjunction with the wet machines, at least once weekly when any of the wet machines is in operation and when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop on the mist collectors shall be maintained within the range of 0.1 to 2.5 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and calibration checked at least once every six (6) months.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.10.8 Record Keeping Requirements and Reporting Requirements

- (a) To document compliance with Condition D.10.6, the Permittee shall maintain records of the daily visible emission notations of the wet machines mist collectors stack exhausts.
- (b) To document compliance with Condition D.10.7, the Permittee shall maintain the following:
 - (1) Weekly records of the following operational parameters during normal operation when venting to the atmosphere:
 - (A) Differential static pressure drop between the inlet and outlet across the bag filters; and
 - (2) Documentation of all response steps implemented, per event .
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

- (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of the Part 70 permit.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for a Significant Source Modification

Source Name: DaimlerChrysler Corporation
Source Location: Kokomo Transmission Plant (KTP), 2401 South Reed Road, Kokomo, Indiana
and
Kokomo Casting Plant (KCP), 1001 East Boulevard, Kokomo, Indiana
County: Howard
SIC Code: 3714
Significant Source Modification: 067-12243-00065
Operation Permit No.: T067-6504-00065 Issuance Date: September 1, 1999
Permit Reviewer: Aida De Guzman

On November 7, 2000, the Office of Air Management (OAM) had a notice published in the Kokomo Tribune, Kokomo, Indiana, stating that DaimlerChrysler Corporation had applied for a significant source modification to operate equipment that will be used in the aluminum parts casting, and the manufacture of various parts for automobile and light duty-truck transmissions. The notice also stated that OAM proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On December 5, 2000, DaimlerChrysler Corporation submitted comments on the proposed source modification permit. The summary of the comments is as follows (changes are bolded and deletions are struck-through for emphasis):

Comment 1: In Condition D.10.5 DaimlerChrysler is requesting that separate testing for PM₁₀ should not be explicitly required in the modification because the PM testing can be performed to include condensable PM, which would also account for PM₁₀, as all condensable PM is assumed to be PM₁₀. Since separate emission estimates for PM₁₀ were not included in the modification application, the PM and PM₁₀ limits are identical. Therefore, separate testing to verify a PM₁₀ emission rate is unnecessary as all PM₁₀ emissions will be included in the PM results. The proposal to conduct a single test for PM and PM₁₀ has previously been discussed with IDEM. Performing a single test to measure both PM and PM₁₀ reduces the burden on the facility and still demonstrate compliance with permitted emission rates. The KCP draft Part 70 Operating Permit does not specify the specific test methods for PM and PM₁₀ and DaimlerChrysler is requesting the same approach for this modification for purposes of consistency. This approach allows the IDEM Compliance Data Section the authority to require a combined test or separate test at their discretion. There are no regulatory requirements that specify a particular test method to be used for this type of source. Based upon the above, DaimlerChrysler proposes the following revisions:

“Compliance stack tests on four (4) representative oil mist collectors shall be made within 180 days after achieving maximum production rate, but no later than 365 days after receipt of this permit. The Permittee shall perform PM and PM₁₀ testing. ~~utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or Testing shall be conducted using other~~ methods as approved by the Commissioner. This test shall be repeated at least once

every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

Response 1: IDEM, Compliance Data Section has agreed to DaimlerChrysler's proposal of not mentioning the tests methods in this specific Section D condition as long as "PM and PM10" is retained in the condition. For consistency purposes Condition D.10.5 of this source modification will be revised using the Testing Requirement Condition from the proposed KCP draft Part 70 permit as follows:

D.10.5 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAV 2-1.1-11]

Compliance stack tests on four (4) representative oil mist collectors shall be made within 180 days after achieving maximum production rate, but no later than 365 days after receipt of this permit. The Permittee shall perform PM and PM10 testing, ~~utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or~~ Testing shall be conducted using other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

Comment 2: DaimlerChrysler believes that the requirement for visible emission notations performed during each shift is unwarranted and overly burdensome and therefore, it should be deleted from the modification. The draft modification currently imposes compliance monitoring obligation through periodic stack testing (Condition D.10.5) and weekly pressure reading (Condition D.10.7). Periodic stack testing combined with weekly pressure drop readings constitute adequate periodic monitoring because they will occur on a regular basis and are capable of providing a reasonable assurance of compliance. The stack testing and pressure drop monitoring will provide reliable data that is representative of the source's compliance with the applicable requirements of the modification.

USEPA's 9/15/98 "Periodic Monitoring Guidance for Title V Operating Permit Program" was set aside by the D.C. Circuit Court of Appeals as improperly expanding the scope and stringency of what is required as "periodic monitoring". Although set aside, that guidance identifies several criteria to be considered by the permitting authority in evaluating the "appropriate periodic monitoring methodology". When those criteria are applied to the emission sources and control equipment to be installed under the modification, those criteria support the use of stack testing combined with pressure drop readings as adequate compliance monitoring, without the need for visible emission notation.

- It is highly unlikely that emissions from the oil mist collection operation will exceed the permit limit. Even without emissions controls provided by the oil mist collectors, emissions from the wet machining operations are expected to comply with the permit limit.
- The wet machining operations have very little variability and are designed as "steady state" operations. There will be minimal variability of emissions from these emission sources over time.

- Stack testing combined with parametric monitoring of pressure drop will provide documentation of the equipment specific relationship between parameter indicator range and compliance with the permitted emission limit.
- Visible emission notation of whether exhaust gases appear “normal” or “abnormal” will not be correlated the actual emission testing of the mist collectors. Furthermore, the inherent subjectivity of the observer makes this data even less reliable as a means of assuring compliance.
- The requirements for visible emission notation, particularly on a per shift basis, creates technical issues, safety concern and unjustified costs. Those issues include the impossibility of conducting observations at night or during inclement weather, requiring safe access to and exit from the facility rooftops (at night, during winter months and inclement weather), and the manpower that would be required to take and record hundreds of “observations” during a normal work week.

In short, even USEPA’s overly stringent Periodic Monitoring guidance would require no more than periodic stack testing combined with parametric monitoring of pressure drop. This combination of monitoring will allow DaimlerChrysler to fully assure compliance with the applicable requirements of the Modification permit.

If visible emissions are required in lieu of pressure drop readings, then the visible emission readings should be required on a daily basis versus per shift. Daily monitoring is more than adequate because the wet machining operations operate at a steady state and visible emissions from these types of sources are expected to be zero even without the operation of an oil mist collector. In addition, reducing the frequency to daily observation would mitigate some of the technical, safety, and economic issues noted above. There is no further compliance assurance gained by the requirement of visible emission observations performed and results recorded on a per shift basis.

In addition, please note that the wet machining units are individually insignificant sources and if a smaller number of machines were to be installed, there would be no monitoring requirements. KTP was issued its Part 70 Operating Permit in September 1999 and it includes the requirement of visible emission observation only for certain sources such as shotblast machines and coal-fired boilers. These sources have the requirement to conduct daily visible emission notations. In issuing the Part 70 Operating Permit, IDEM determined that periodic monitoring was not needed for the existing wet machines at KTP.

Response 2: IDEM, OAM has changed the “per shift visible emission notation” required in Condition D.10.6 of the draft permit to “daily visible emission notation”. Condition D.10.6 is revised as follows:

D.10.6 Visible Emissions Notations

- (a) **Daily** visible emission notations of the mist collectors stack exhaust shall be performed ~~per shift~~ during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the

process is in operation, not counting startup or shut down time.

- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Condition D.10.8 (a) was also revised as follows:

D.10.8 Record Keeping Requirements and Reporting Requirements

- (a) To document compliance with Condition D.10.6, the Permittee shall maintain records ~~every shift~~ of the **daily** visible emission notations of the wet machines mist collectors stack exhausts.

Comment 3: In the Technical Support Document - Potential to Emit of Modification After Issuance (Page 6 of 8)

DaimlerChrysler is proposing to install several oil mist collectors (with a combined air flow rate of 450,000 cubic feet per minute) with a total PM/PM10 emissions limit of 0.77 pounds per hour as shown in Table 8 of the Modification application. Therefore, DaimlerChrysler is requesting the following revision:

- “(b) Pursuant to 326 IAC 2-2 and 40 CFR 52.21, in order for the PM and PM10 emissions from both die casting and wet machining operations will stay below 25 tons per year and 15 tons per year respectively, ~~each of the five (5)~~ oil mist collectors which control the 149 wet machines will be limited to 0.03 grain per dry standard ~~cubic foot~~ and a total of 0.77 ~~0.05~~ pound per hour PM/PM10 emission”.

Response 3: Since the applicability of 326 IAC 2-2, Prevention of Significant Deterioration and 40 CFR 52.21 is for the total PM and PM10 emissions, the following sentence will be added in the reference paragraph as follows:

- (b) Pursuant to 326 IAC 2-2 and 40 CFR 52.21, in order for the PM and PM10 emissions from both die casting and wet machining operations will stay below 25 tons per year and 15 tons per year respectively, each of the fifteen (15) oil mist collectors which control the 149 wet machines will be limited to 0.03 grain per dry standard ~~cubic foot~~ and 0.05 pound per hour PM/PM10 emission, **which will result to a combined PM and PM10 emissions limit of 0.77 pound per hour.**

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Part 70 Significant Source Modification

Source Background and Description

Source Name: DaimlerChrysler Corporation
Source Location: 2401 South Reed Road, Kokomo, Indiana 46904
County: Howard
SIC Code: 3714
Significant Source Modification: 067-12243-00065
Operation Permit No.: T067-6504-00065 Issuance Date: September 1, 1999
Permit Reviewer: Aida De Guzman

The Office of Air Management (OAM) has reviewed a Part 70 permit application from Daimler/Chrysler Corporation relating to the operation of following equipment used in the aluminum parts casting, and the manufacture of various parts for automobile and light duty-truck transmissions:

- (a) Kokomo Casting Plant (KCP):
 - (1) Sixteen (16) die cast machines. The die casting operation has four segments, casting (segment 1), die lube (segment 2) with a maximum usage rate of 4.9 gallons per hour, hot oil system lube (segment 3), and tip lube (segment 4) with a maximum usage rate of 2.23 gallons per hour; and
- (b) Kokomo Transmission Plant (KTP):
 - (1) One hundred forty nine (149) wet machines, controlled by fifteen (15) oil mist collectors, each machine oil mist collector has a maximum air flow rate of 30,000 actual cubic feet per minute (acfm).

Source Definition

This aluminum parts casting, and the automobile and light duty transmission manufacturing plant consists of two (2) plants: The Chrysler Kokomo Transmission plant has been combined with Chrysler Kokomo Casting plant.

- (a) Plant 1 is located at Kokomo Transmission Plant (KTP), 2401 South Reed Road, Kokomo, Indiana 46904; and
- (b) Plant 2 is located at Kokomo Casting Plant (KCP), 1001 East Boulevard, Kokomo, Indiana 46904.

A separate Part 70 permit T067-6504-00065 was issued for the Chrysler Kokomo Transmission Plant, where a determination was made that these two (2) plants are one (1) source. This one source determination also applies for PSD purposes. The Chrysler Kokomo Casting Plant will also be issued a separate Part 70 permit solely for

administrative purposes.

History

On May 7, 2000, Daimler/Chrysler Corporation submitted an application to the OAM requesting to add additional die cast and wet machines to their existing plant. Daimler/Chrysler Corporation, Kokomo Transmission Plant was issued a Part 70 permit T067-6504-00065 on September 1, 1999.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
TBD	wet machines	TBD	TBD	TBD	TBD

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on May 7, 2000, with additional information received on July 18, 2000; September 13, 2000; October 19, 2000; and October 24, 2000.

Emission Calculations

The emissions determined and the emission factors used for the proposed die cast machines (die lube, hot oil system and tip lube) and wet machines were submitted by the source, which were based from engineering judgement. There are no EPA published factors for aluminum injection molding that can be utilized to determine the emissions.

(a) Die Casting Operation Emissions: There are four (4) segments in die casting operation.

Aluminum Die Casting (Segment 1)					
Pollutant	Maximum Rate (ton/hr)	Emission Factor (lb/ton)	Pollution Control Efficiency (%)	Uncontrolled Potential to Emit	Controlled Potential to Emit
PM = PM10	N/A	0	0.0	0	0.00

Emissions are considered zero because the aluminum is being injected into a closed system, and therefore, emissions are negligible.

Die Lube (Segment 2)							
Maximum Usage (gal/hr)	Density (lb/gal)	Potential Usage (lb/hr)	% Solids	Emission Factor (%)	Pollution Control Efficiency (%)	PM/PM10 Uncontrolled Potential to Emit (ton/yr)	PM/PM10 Controlled Potential to Emit (ton/yr)
4.9	8.232	40	35	8.0	0	4.96	4.96

8% of the die lube is emitted, 2% stays on part, 90% goes to the Waste Water Treatment Plant (WWTP).

Hot Oil System Lube (Segment 3)					
Pollutant	Maximum Rate (ton/hr)	Emission Factor (lb/ton)	Pollution Control Efficiency (%)	Uncontrolled Potential to Emit	Controlled Potential to Emit
VOC	N/A	0	0.0	0	0.00

Hot oil is used in a closed loop system. The oil flows through a heater into the die and back to the heater for the purpose of preheating the die temperature. Losses to the atmosphere are negligible. Oil losses are only due to leaks from the system and are directed to WWTP. Lubricants used are water based and most of the organic components don't break down and stay in a form that is either liquid or solids in the waste water or as residual deposits in the plant.

Tip Lube (Segment 4)						
Pollutant	Maximum Usage (gal/hr)	Emission Factor (%)	Emission Rate (lb/hr)	Pollution Control Efficiency (%)	Uncontrolled Potential to Emit (ton/yr)	Controlled Potential to Emit (ton/yr)
PM/PM10	2.23	8%	1.31	0	5.74	5.74

(b) Wet Machining Emissions: Wet machining operations are connected to oil mist collectors:

Number of wet machines: 149
Number of existing wet machines: 3,800
Number of oil mist collectors: 15

Unit	Air Flow (acfm)	Outlet grain loading (grain/acf)	Control Efficiency (%)	Inlet (grain/acf)
Oil Mist Collectors	30,000	0.0002	85	0.0013

Material	Maximum Usage Rate Per Machine (lb/hr)	Maximum Usage Rate for 149 Machines (lb/hr)	VOC Content (lb/lb oil)	Formaldehyde Content (lb/lb oil)
Machining Fluids	0.89	132.6	0.086	1.00 x10 ⁻⁴

Pollutant	Maximum Usage Rate Per Machine (lb/hr)	PM Emission Factor (%)	PM Emission Rate per Machine (tons/yr)	PM Emission Total for 149 Machines (tons/yr)	PM Emission Total for 149 Machines After Control (tons/yr)
PM/PM10	0.89	3.5	0.135	20.26	3.38

Pollutant	Maximum Usage Rate Per Machine (lb/hr)	PM/PM10 Emission Factor (lb/hr)	VOC Fraction of PM	Control Efficiency (%)	Uncontrolled Emissions per Machine (tons/yr)	Controlled Emissions per Machine (tons/yr)	Uncontrolled Emissions for 149 Machines (tons/yr)	Controlled Emissions for 149 Machines (tons/yr)
VOC	0.89	0.051	0.086	0	0.02	0.02	2.98	2.98
HAP-Formaldehyde	0.85		2.5 x10 ⁻⁶	0	2.2 x 10 ⁻⁵	2.2 x 10 ⁻⁵	0.014	0.014

Machining fluids include cutting oils, grinding oil and drilling oil.

SUMMARY OF EMISSIONS (TONS/YEAR)					
FACILITY/ OPERATION	PM/PM10 UNCONTROLLED EMISSIONS	PM/PM10 CONTROLLED EMISSIONS	VOC UNCONTROLLED EMISSIONS	VOC CONTROLLED EMISSIONS	HAP- FORMALDEHYDE
KOKOMO CASTING PLANT - DIE CASTING:					
Aluminum Die Casting (Segment 1)	0.00	0.00	0.00	0.00	0.00
Die Lube (Segment 2)	4.96	4.96	0.00	0.00	0.00
Hot Oil System Lube (Segment 3)	0.00	0.00	0.00	0.00	0.00
Tip Lube (Segment 4)	5.74	5.74	0.00	0.00	0.00
KOKOMO TRANSMISSION PLANT- WET MACHINING	20.26	3.38	2.9	2.9	0.014
TOTAL	30.96	14.08	2.9	2.9	0.014

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a

federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	30.96
PM-10	30.96
SO ₂	0.00
VOC	2.9
CO	0.00
NO _x	0.00

HAP's	Potential To Emit (tons/year)
Formaldehyde	0.014
TOTAL	0.014

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7.10.5(f), since the PM and PM10 potential to emit before controls are emitted at levels greater than the major source significant thresholds of 25 tons per year and 15 tons per year, respectively.

County Attainment Status

The source is located in Howard County.

Pollutant	Status (attainment, maintenance attainment, or unclassifiable; severe, moderate, or marginal nonattainment)
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	not determined

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Howard has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Howard County has been classified as attainment or unclassifiable for all the other

criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based from the Airs Facility Subsystem Quick Look Report, dated January 21, 1999):

Pollutant	KCP Emissions (tons/year)	KTP Emissions (tons/year)	Total Emissions from the 2 plants (tons/year)
PM	305	175	480
PM-10	184	67.8	251.8
SO ₂	61.8	1,638	1,700
VOC	16.9	18.75	35.65
CO	41.5	200	241.5
NOx	217.8	844.75	1,062.6

This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Kokomo Casting Plant - Die Casting	10.7	10.7	0.0	0.0	0.0	0.0	0.0
Kokomo Transmission Plant - Wet Machining	3.38	3.38	0.0	2.9	0.0	0.0	0.014
TOTAL	14.08	14.08	0.0	2.9	0.0	0.0	0.014

- (a) This modification to an existing major stationary source is not major because the emissions increase for PM is less than 25 tons per year, and PM10 emissions increase is less than 15 tons per year. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) Pursuant to 326 IAC 2-2 and 40 CFR 52.21, in order for the PM and PM10 emissions from both die casting and wet machining operations will stay below 25 tons per year and 15 tons per year respectively, each of the five (5) oil mist collectors which control the 149 wet machines will be limited to 0.03 grain per dry standards/dscf and 0.05 pound

per hour PM/PM10 emissions.

Federal Rule Applicability

- (a) New Source Performance Standards:
There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) National Emission Standards for Hazardous Air Pollutants:
There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Individual Facilities

- (a) 326 IAC 8 (Volatile Organic Sources)
There are no provisions in article 8 that will apply to the die casting operation and the wet machining operation.
- (b) 326 IAC 8-1-6 (General Reduction Requirements)
This rule applies to new facilities as of January 1, 1980, which have potential VOC emissions of 25 tons per year, located anywhere in the state, which are not otherwise regulated by other provisions of this article 326 IAC 8, shall reduce VOC emissions using best available control technology (BACT).
 - (1) The fluid application to the wet machines is not subject to 326 IAC 8-1-6, because its potential VOC emissions of 2.98 tons per year are below 25 tons per year.
- (c) 326 IAC 6-1 (Particulate Emissions Limitations for Nonattainment Areas)
 - (1) Pursuant to 326 IAC 6-1-7 PM emissions from Howard County is subject to 326 IAC 6-1-15. PM emissions from **specific sources and facilities** of DaimlerChrysler were limited in 326 IAC 6-1-15, which in this case will **not** apply to the proposed facilities.
 - (2) Sources or facilities not specifically listed in section 7 of this rule and have potential to emit one hundred (100) tons or more of particulate matter per year or have actual emissions of ten (10) tons or more of particulate matter per year shall comply with the limitations of section 2. Section 2 of this rule mandates a PM emission limit of 0.03 grain per dry standard cubic foot. Since the wet machines in this application have the actual PM emissions of 10 tons per year or greater, they are subject to 326 IAC 6-1, and PM emissions is limited to 0.03 grain per dry standard cubic foot.

Limiting the grain loading and the air flow rate from these facilities will also make 326 IAC 2-2, PSD not applicable.
 - (3) The die casting operation, which includes die lube and tip lube is not subject to 326 IAC 6-1, because it is an insignificant activity, and the actual PM emissions are less than 10 tons per year.

Compliance Monitoring Requirements

- (a) A compliance test is required on four (4) representative oil mist collectors to verify emissions are below 0.05 pound of PM per hour for each oil mist collector and annual emissions are below 25 tons per year for PM and 15 tons per year for PM10. The PM and PM10 are assumed to be the same, and therefore PM is also limited to less than 15 tons per year. During the tests operating parameters will be established that correspond to these limits. Compliance Monitoring is required for these mist collectors for PSD purposes, although the PM and PM 10 allowable or limits are below the 10 lb/hr threshold for Compliance Monitoring.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed **Part 70 Significant Source Modification No. 067-12243-00065**.